therefore, be unreasonable to suppose that hookworm disease had any part in the death rates of North Carolina under five years of age; nor would we expect to find the disease playing a rôle of any importance as the contributing factor of death beyond the fiftieth year, because for a number of years preceding that age people have worn shoes and the infecting parasite, long since having reached its natural longevity, has loosened its bloody grip upon the body. Moreover, the diseases that dominate that period as causes of death would require a considerable stretch of the imagination to connect their etiology with an infection of hookworms twenty, thirty or forty years since. This leaves us the age period from five to fifty in which to study hookworm as a contributor to death rates. We would naturally expect the disease to affect death rates during this period, for it is during the first twenty years of this period that at least ninety per cent of the cases in this State exist, and it is during this age, too, that that class of diseases, the infections, tuberculosis, typhoid fever, blood poison, etc., the diseases whose frequency and effect would be influenced by factors producing a lower vitality, such as hookworm disease, are active. Observe Chart D. Note that the high death rate of the State is under the fifth year, that is, in the non-hookworm period; that the death rate of the State between the fifth and fiftieth year is but 2.1 per cent in excess of the average death rate for that age in the registration area of the United States where there is no hookworm disease. Charging hookworm with the entire excess death rate of this forty-five-year period, the disease as a cause of death falls far short of typhoid fever, and is not in the same class with tuberculosis and diarrhœal diseases of children.

The place of hookworm disease with the other important diseases demanding the attention of health departments will be fixed ultimately by vital statistic reports. Fortunately, there are now three States in the South—Virginia, Kentucky, and Mississippi—who have enforcible vital statistics laws, and it will probably devolve upon these States to solve one of the most important phases of the hookworm problem, namely, its effect on public life. Until this time the public mind has rated hookworm disease altogether on its frequency. In order to appreciate the importance of this disease from a public standpoint it is not only necessary to know that 800,000 North Carolinians carry the parasites in their intestines, but it is equally necessary to have some reasonable idea, based upon an ample investigation, as to the number of worms the average host contains. We must recognize the principle that parasitism is one thing; pathogenesis another thing. Has the average North Carolinian, has the average Southerner, ten, thirty, fifty, one hundred, or two hundred hookworms? For thirty-five college students from which the worms were carefully counted, by the Allen J. Smith method, there was but an average of twenty worms. A letter from Dr. Bailey K. Ashford, of Porto Rico, in answer to an inquiry from me, states that he regards from three hundred to five hundred worms necessary to produce recognizable symptoms; that it would require from seven hundred to fifteen hundred to produce medium or rather severe infection, and from two thousand to three thousand to produce death.

Reasoning from the facts in the case, the vital statistics from this State, a very large part of the thirty per cent infection of our people is so light as to be, *comparatively* speaking, a case of parasitism more than a condition of pathogenesis, and hookworm disease ranks, in North Carolina, among the other important causes of death, as fourth or fifth in the list, somewhere near malaria—a disease which resembles it in geographic distribution, in fre-